WHAT IS CLAIMED IS:

1. A method for automatically creating crosstalk-corrected data of a microarray, the method comprising:

providing a microarray substrate having calibration dye spots, each of the calibration dye spots comprising a single pure dye;

for each of the calibration dye spots, generating a dye image containing at least one of the calibration dye spots for each of a plurality of output channels;

for each of the calibration dye spots, measuring an output of each of the output channels to obtain output measurements;

computing a set of correction factors from the output measurements; and

applying the set of correction factors to data obtained from microarray images containing spots having dyes with excitation or emission spectra to obtain crosstalk-corrected data.

2. The method as claimed in claim 1 wherein the step of generating includes the step of imaging the calibration dye spots to produce a dye image for each calibration dye spot.

3. The method as claimed in claim 1 wherein the substrate is a glass slide.

4. The method as claimed in claim 1 wherein each of the channels is optimized for a different dye.

5. The method as claimed in claim 1 wherein the step of generating is performed by an imager.

6. The method as claimed in claim 1 wherein each of the dyes is a fluorescent dye.

7. The method as claimed in claim 1 wherein the step of computing includes the step of computing crosstalk ratios based on spot brightness values for each of the calibration dye spots on each of the output channels.

8. The method as claimed in claim 1 wherein the number of calibration dye spots is more than or equal to the number of dyes.

9. The method as claimed in claim 1 wherein the calibration dye spots are hybridized target DNA and fluorescently labeled probe DNA.

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10. A system for automatically creating crosstalk-corrected data of a microarray, the system comprising:

a microarray substrate having calibration dye spots, each of the calibration dye spots comprising a single pure dye;

an imager having a plurality of output channels wherein for each of the calibration dye spots the imager generates a dye image containing at least one of the calibration dye spots for each of the output channels;

means for measuring an output of each of the output channels for each of the calibration dye spots to obtain output measurements;

means for computing a set of correction factors from the output measurements; and

means for applying the set of correction factors to data obtained from microarray images containing spots having dyes with excitation or emission spectra to obtain crosstalk-corrected data.

11. The system as claimed in claim 10 wherein the imager is a microarray scanner which produces a dye image for each calibration dye spot by scanning the microarray substrate with a laser of a proper wavelength for the particular dye.

12. The system as claimed in claim 10 wherein the substrate is a glass slide.

13. The system as claimed in claim 10 wherein each of the channels is optimized for a different dye.

14. The system as claimed in claim 11 wherein the microarray scanner is a confocal laser microarray scanner.

15. The system as claimed in claim 10 wherein each of the dyes is a fluorescent dye.

16. The system as claimed in claim 10 wherein the means for computing includes means for computing crosstalk ratios based on spot brightness values for each of the calibration dye spots on each of the output channels.

17. The system as claimed in claim 10 wherein the number of calibration dye spots is more than or equal to the number of dyes.

18. The system as claimed in claim 10 wherein the calibration dye spots are hybridized target DNA and fluorescently labeled probe DNA.